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Proceedings of the Maritime Provinces Regional Advisory Process on Scallops in SFA 29

12 May 2005

Mic Mac Amateur Aquatic Club
Dartmouth, N.S.

Ross Claytor

Compte rendu des réunions du Processus consultatif régional sur les pétoncles de la ZPP 29

Le 12 mai 2005

Mic Mac Amateur Aquatic Club
Dartmouth, N.-É.

Ross Claytor

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Bedford Institute of Oceanography / Institute océanographique de Bedford
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Foreword

The purpose of these proceedings is to archive the activities and discussions of the meeting, including research recommendations, uncertainties, and to provide a place to formally archive official minority opinions. As such, interpretations and opinions presented in this report may be factually incorrect or mis-leading, but are included to record as faithfully as possible what transpired at the meeting. No statements are to be taken as reflecting the consensus of the meeting unless they are clearly identified as such. Moreover, additional information and further review may result in a change of decision where tentative agreement had been reached.

Avant-propos

Le présent compte rendu fait état des activités et des discussions qui ont eu lieu à la réunion, notamment en ce qui concerne les recommandations de recherche et les incertitudes; il sert aussi à consigner en bonne et due forme les opinions minoritaires officielles. Les interprétations et opinions qui y sont présentées peuvent être incorrectes sur le plan des faits ou trompeuses, mais elles sont intégrées au document pour que celui-ci reflète le plus fidèlement possible ce qui s'est dit à la réunion. Aucune déclaration ne doit être considérée comme une expression du consensus des participants, sauf s'il est clairement indiqué qu'elle l'est effectivement. En outre, des renseignements supplémentaires et un plus ample examen peuvent avoir pour effet de modifier une décision qui avait fait l'objet d'un accord préliminaire.

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TABLE OF CONTENTS

ABSTRACT / RÉSUMÉ iv

INTRODUCTION 1

OVERVIEW OF WORKING PAPER 1
- Fishery Background 1
- Summary of Results 2
- Comments, Questions, Recommendations, and Discussion 2
- Landings 3
- Commercial Catch Rate 3
- Meat Weights 3
- Survey 3
- Lobster By-catch 4
- Scallop Mortality Estimates 5
- Stock Status 5
- Ecosystem 5
- Comments on Where Survey is Done Presented After Meeting 5

APPENDIX 1. LIST OF PARTICIPANTS 6

APPENDIX 2. INVITATION LETTER 7

APPENDIX 3. MEETING REMIT 9

ABSTRACT

These proceedings record discussions that were held during the Regional Advisory Process (RAP) meetings for Scallop Fishing Area (SFA) 29 scallop stocks on 12 May 2005.

RÉSUMÉ

Le présent compte rendu relate les discussions tenues lors des réunions du Processus consultatif régional (PCR) sur les stocks de pétoncle de la zone de pêche du pétoncle (ZPP) 29, le 12 mai 2005.

INTRODUCTION

The chair, Ross Claytor of the DFO, opened the meeting. The remit was identified as:

Assess the status of SFA29 scallop and provide TAC advice. The assessment should include:

- Provide TAC advice for SFA 29 scallop fisheries by area using analysis of catch rate and survey biomass trends.
- Provide an assessment of the potential for lobster by-catch in each area.

Stephen Smith and Mark Lundy provided a working paper, 'SFA 29: Preliminary status for 2004' as supporting documentation for satisfying the remit. A presentation by Stephen Smith summarized the material in the document and the results of multi-beam sonar bottom mapping that resulted from a JPA with the scallop industry, NRCAN, and DFO.

External reviewers, John Tremblay and Jae Choi, provided initial comments on the working paper and presentation and the chair opened the meeting to the floor for additional comments. The comments were received by section of the working paper.

Upon the completion of the review of the working paper, the stock status report (SSR) was reviewed.

OVERVIEW OF WORKING PAPER

The working paper consisted of the following sections: Landings, Commercial catch rates, Meat weights, Survey, Survey biomass trends, Lobster by-catch, and Stock status. The discussion occurred by topic after a brief description of the fishery.

Fishery Background

Scallop Fishing Area (SFA) 29 encompasses a very large inshore area inside the 12-mile territorial sea, from the south of Yarmouth (latitude 43°40'N) to Cape North in Cape Breton. This report refers to only that portion of SFA 29 west of longitude 65°30'W continuing north to latitude 43°40'N.

Prior to 1986, the Full Bay Scallop fleet had fished in this area without restrictions. Following the 1986 inshore/offshore scallop fishing agreement, fishing by the Full Bay fleet was restricted to north of latitude 43°40'N. A limited fishery by the Full Bay fleet was granted from 1996–98. Access was again granted to this fleet in 2001 with a full at-sea monitoring program, and with a condition of a post-season industry-funded survey. Scallop fishers had consulted with lobster fishers in the area to deal with potential conflicts. Lobster by-catch was minimal in 2001 despite high scallop catch rates.

In 2002, the Minister approved access to this area by the Full Bay fleet and eligible inshore east of Baccaro licence holders who are authorized to fish in SFA 29 west of longitude 65°30'W. SFA 29 inshore scallop licenses were historically restricted to east of Baccaro (East of longitude 65°30'W). A joint project agreement was signed with the fishing fleets, Natural Resources Canada and Department of Fisheries and Oceans with all parties providing funds to conduct multi-beam acoustic mapping of the seafloor, other scientific work, and VMS monitoring. A map showing bottom features for the entire area has been prepared and was

distributed to the fishermen for the 2004 fishery. Work is continuing on analyzing surficial geology and the spatial distribution of scallops.

In 2004, the fishery opened on 14 June and continued until 31 July. SFA 29 consists of 5 fishing areas labelled A, B, C, D, and E. Prior to 2004, Area D had been closed to fishing because of the large numbers of smaller of young scallops in the area. The western half of Area D was opened for the 2004 season after it was determined from the 2003 survey there were enough commercial size scallops for a fishery. The eastern half of Area D remained closed because most of the scallops there were smaller than 110 mm shell height.

Summary of Results

A total of 511 t (376 t Full Bay; 135 t east of Baccaro) was landed against a TAC of 600 t.

Average catch rates for the Full Bay Fleet were 54.4 kg/h over the whole area in 2004 compared to 49.7 kg/h in 2003.

The average catch rate for the east of Baccaro Fleet was 32.0 kg/h over the whole area compared to 34.8 kg/h in 2003.

Average meat weights ranged from 14.9 g to 22.6 g.

While a catch of 80 t in area A in 2004 did not seem to result in a large decline in survey biomass, continued fishing in this area in 2005 will probably be limited to scallops ages 6 and older.

- Survey biomass indices of commercial size scallops indicate that the 2004 catch level of 80 t may be excessive for Area B in 2005 given the lack of recruitment.

- Survey biomass indices of commercial size scallops in area C appear to be stable at a catch of 160 t in 2004.

While Area D to the east of 65° 40' W can be open to fishing in 2005, a lower TAC of 55 t is recommended for the whole Area of D.

There was not enough survey information to recommend catch levels for Area E. The 2004 survey indicates that this area is marginal for scallop habitat.

The by-catch of lobster in this area was low in 2004 but it was not clear what impacts the scallop fishery may have had on the lobster population.

Comments, Questions, Recommendations, and Discussion

Comments and questions occurred throughout the discussion of the working paper. These have been organized by topic of the working paper. Sometimes the comment or question occurred and no answer or response was possible. These are left for future authors to consider for the next assessment. At other times, a response was possible and these are indicated.

Landings

There was considerable discussion on discrepancies between reported and actual landings in terms of amounts and location. However, no data was presented to show that this was occurring and it could not be further considered in the discussion. Additional information from enforcement on charges and convictions may be required for future assessments.

Commercial Catch Rate

There was confusion on the how catch rates were reported and compared among years. This was cleared up in the SSR.

Meat Weights

There was no discussion on the implications of meat weight.

Survey

Comment: Confidence limits on survey results in the presentation were appreciated.

Questions: How were the confidence limits were calculated?

Response: The author indicated they were bootstrapped.

Recommendation: Biomass estimates could be obtained by expanding kg / tow to area but it would be relative as you would need catchability. However, it would give a first order ballpark idea of biomass in the area.

Response: It was noted that there was only 4 years of data available to assess the stock. In Digby, there are 24 years of data that have been used to model the population. In general, 10 or more years of data are needed to develop biomass models.

Comment: It was noticed that Area D had a high concentration of clappers. It was noted that these were localized and associated with large tows of animals of all sizes. Area D had the highest concentration of clappers in the 80 – 109 mm size range.

Comment: Younger animals are found more inshore and to the east.

Response: Industry felt this was a result of prevailing surface currents.

Question: Why is Area E marginal, it is adjacent to German Bank which has scallops? It has a complicated topography and is not easy to fish.

Comment: Survey vessel changed which puts comparability in jeopardy. There was little or no consultation about this change. There was also little or no consultation about the survey outside of Area C. The October survey will have little comparison with respect to previous summer surveys as they relate to lobster by-catch issues. Comparative tows should have been made. The lack of consultation and sensitivity to partners puts the survey process in jeopardy.

Response: A comparative survey can still be done. Relative trends should be similar. Gears were similar among each survey. Experiments with the Hart indicate that catchability is more related to bottom type than vessel or captain provided gear is the same.

Comment: Some felt the quota was too high because half the scallops were caught on the first tow in the first of repeated tows in the same area. If there were more scallops there it was felt that catches would be sustained through several tows. Therefore, the quota is too high because the biomass estimate is too high.

Lobster By-catch

Question: Why does most of lobster by-catch occur in Area B, if lobsters are also present in Area C?

Response: Spatial information is needed for issues like lobster by-catch. An examination of sediment data may indicate a reason for differences in vulnerability. This has not been examined yet.

Question: Lobster catches in the fishery change each year, how does this affect potential for by-catch?

Response: Lobster biologists for this area will look at annual changes in catch distribution.

Comment: The sizes of lobsters in the by-catch and in the survey are important to report. In particular, the location of berried females should be reported.

Comment: By-catch other than lobster should be reported on observed trips.

Comment: Table 5, should be recorded by fleet.

Response: This could be included in the final document.

Question: What is the lobster by-catch from adjacent areas? The rakes in the offshore fleet are much heavier, than those used in SFA 29. Lobster by-catch may be higher in other areas.

Question: What is the scallop dredge effect on the bottom?

Question: What is the impact of lobster traps on bottom?

Comments and Questions: Survey timing in October may lead to higher by-catch in the survey compared to other years when the survey occurred in September. Knowledge on seasonal movement and molt-timing of lobsters may minimize by-catch. July and August have soft-shell animals, so fishing earlier than July may be beneficial. How does this timing compare to other areas? Timing of the survey is relevant to lobster by-catch. The survey should occur as soon as possible after the fishery closes.

Response: Similar distributional patterns are observed in September and October in areas where by-catch occurs.

Question: What kind of tracking is done of by-catch in lobster gear?

Scallop Mortality Estimates

Question: What methods are available for estimating mortality across years?

Response: Paloheimo Zs may be possible to estimate using survey data.

Stock Status

Comments: The lack of recruitment indicates that more precaution is needed.

- Area A: No comment on recruitment is possible until 2009. Advice is 80t.
- Area B: Biomass is down 57% and there is little recruitment. Advice is that the 2004 catch level of 80 t may be excessive for Area B in 2005 given the lack of recruitment.
- Area C: Biomass index is stable. An assessment is only available within Area C. There is more recruitment that in other areas. Age 4 and 5 will recruit to the fishery over 2 years. Recruitment 2 – 3 years from now is low. Advice is that Survey biomass indices of commercial size scallop appear to stable at a catch of 160 t.
- Area D: Biomass is down 89% from 2003 in the fished area portion of this area . Advice is that, while Area D to the east of 65° 40' W can be open to fishing in 2005, a lower TAC of 55 t is recommended for the whole Area of D.

Ecosystem

Comment: What role does variation in temperature have on catchability and estimates of stock status? How does temperature and bottom type affect distribution? What is the role of chlorophyll on stock dynamics?

Comments on Where Survey is Done Presented After Meeting

With the exception of two size-classes in the unfished portion of Area D, all size classes showed a decline in survey biomass index. These declines could be within the error bars. When questioned why additional survey tows were completed north of Area C, justification was that a bed may be split by a closure line so an attempt to delineate bed size and potential lobster by-catch. Why wasn't that same justification used for the northern portion of Area D, which contains some of the best tows in the survey? Survey coverage was limited by time available to conduct survey.

APPENDIX 1. LIST OF PARTICIPANTS

[Area code = 902 unless otherwise indicated]

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19 April 2005

Le 19 avril 2005

Distribution

Liste de diffusion

Subject: Stock Assessment Update of SFA 29 West of 65°30'

Objet : Mise à jour de l'évaluation du stock de la ZPP 29, à l'ouest de 65° 30'

The stock assessment update SFA 29 will be reviewed in the Conference Room of the Mic Mac Amateur Aquatic Club, 192 Prince Albert Road, Dartmouth, Nova Scotia, 12 May 2005, commencing at 9:00 am. The meeting's terms of reference are attached.

La mise à jour des évaluations de stock de pétoncle dans ZPP 29 fera l'objet d'un examen dans la salle de conférences du MicMac Amateur Aquatic Club, 192, chemin Prince Albert, Dartmouth, Nouvelle-Écosse le 12 mai 2005, à partir de 9 h. Le cadre de référence de la réunion est joint à la présente.

The purpose of the review is to consider the assessments' data inputs, to examine the scientific approaches of the stock assessments, to identify any weaknesses in data and/or methodology, to help improve the clarity of the assessments, and to make recommendations for further research. It will include a detailed examination of the stock assessment and writing of the Stock Status Report.

La réunion aura pour but d'examiner les données d'entrée des évaluations de stock et les approches scientifiques de ces évaluations, de mettre en évidence toute faiblesse dans les données et/ou la méthodologie, d'améliorer la clarté des évaluations et de formuler des recommandations de recherches futures. Elle comprendra un examen détaillé des évaluations de stock et la rédaction des Rapports sur l'état des stocks.

Copies of the assessment and the draft stock status report will be sent to participants one week before the meeting. At the meeting, DFO science staff will provide a brief overview of the assessments, which will include the main conclusions, the supporting evidence, any new methods, and major limitations. The presentation will be followed by discussion among the participants. The finalised stock status report will be prepared at the meeting. The minutes of this meeting will be published as a proceedings.

Des copies des évaluations et des ébauches de Rapports sur l'état des stocks seront envoyées aux participants une semaine à l'avance. À la réunion, les scientifiques du MPO présenteront un bref aperçu des évaluations, portant sur les principales conclusions, les preuves à l'appui de ces dernières, toute nouvelle méthode et les principales limites. La présentation sera suivie d'une discussion entre les participants. La version définitive des Rapports sur l'état des stocks sera établie à la réunion et le procès-verbal de cette dernière sera publié sous forme de compte rendu.

I would appreciate if you could confirm your attendance with Daisy Williams at (902) 426-3573 (WilliamsD@mar.dfo-mpo.gc.ca).

We greatly appreciate your contribution to this valuable exercise.

Je sous serais reconnaissant de bien vouloir confirmer votre présence en communiquant avec Daisy Williams, au (902) 426-3573 (WilliamsD@mar.dfo-mpo.gc.ca).

Nous vous sommes très reconnaissants de votre contribution à cette importante activité.

Original signed by / Signataire de l'original

Ross Claytor
Meeting chair /Président de la réunion

Attachment / Pièce jointe

cc : RAP Coordination Committee
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Chief Blair Francis/ Blair Bernard, Eskasoni First Nation

Chief Lawrence Paul/ Adrain Gloade, Millbrook First Nation

Chief Terrance Paul/ Mike MacIntyre, Membertou First Nation

APPENDIX 3. MEETING REMIT

REMIT

Meeting of the Maritimes Regional Advisory Process on SFA 29 Scallop Stock

12 May 2005

Mic Mac Amateur Aquatic Club
192 Prince Albert Road
Dartmouth, Nova Scotia

SFA 29

Assess the status of SFA29 scallop and provide TAC advice. The assessment should include:

- Provide TAC advice for SFA 29 scallop fisheries by area using analysis of catch rate and survey biomass trends.
- Provide an assessment of the potential for lobster by-catch in each area.